

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 2-4 AND HUNTINGTON HIGH SCHOOL ENTRANCE IN CALVERT COUNTY. MD 2-4 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

CONTROLLER OPERATION

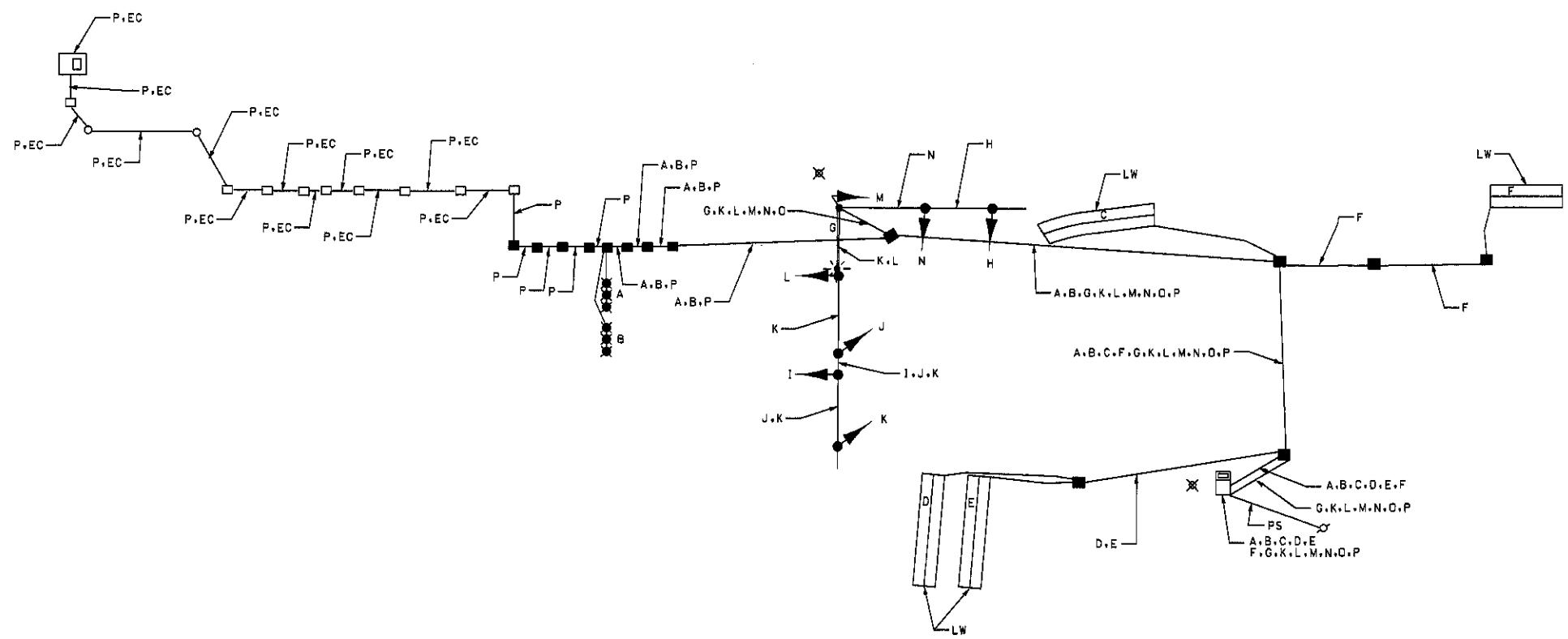
THE INTERSECTION WILL OPERATE IN A NEMA THREE-PHASE, FULL-TRAFFIC-ACTUATED MODE, WITH THE N.B. MD 2-4 THROUGH TRAFFIC, THE S.B. MD 2-4 LEFT TURN TRAFFIC AND HUNTINGTON HIGH SCHOOL ENTRANCE OPERATING AS SEPERATE PHASES. THE S.B. MD 2-4 LEFT TURN WILL BE CONTROLLED BY A FLASHING RED SIGNAL UNTIL QUEUED VEHICLES ACTUATE A STEADY GREEN LEFT TURN INDICATION AND N.B. MD 2-4 THROUGH TRAFFIC IS STOPPED. MD 2-4 S.B.

THROUGH TRAFFIC WILL NOT BE SIGNALIZED. A FULL-TRAFFIC-ACTUATED, EIGHT PHASE CONTROLLER WITH (4) FOUR-CHANNEL, TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIERS, TELEMETRY MODULE, ISOLATION BOARD AND SPECIAL RELAY HOUSED IN A NEMA SIZE "6" BASE MOUNTED CABINET WILL BE USED. INTERCONNECT FROM HUNTINGTON HIGH SCHOOL ENTRANCE TO MD 524/COX ROAD WILL BE PROVIDED.

SPECIAL NOTES

1. THE CONTRACTOR SHALL DELIVER THE CABINET AND CONTROLLER TO THE SHA SIGNAL SHOP AT LEAST THREE WEEKS PRIOR TO INSTALLATION FOR WIRING AND TESTING.

WIRING DIAGRAM



WIRING KEY

A-B	MICRO-LOOP PROBE	
C-F	2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.) ALUMINUM SHIELDED	
G	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 A.W.G.)	P 12-PAIR COMMUNICATION CABLE JELLIED FILLED, (UNDERGROUND)
H-J	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	EC EXISTING CABLE
K-N	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)	LW LOOP WIRE (NO. 14 A.W.G.)
D	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)	PS PROPOSED ELECTRIC SERVICE
		ML MICRO-LOOP PROBE
		⊗ GROUND ROD

PHASE CHART

	1	2	3	4	5	6	7	8
	ⓖ	ⓖ	ⓖ	ⓖ	ⓖ	ⓖ	ⓖ	ⓖ
PHASE 2	G	G	FL/R	FL/R	FL/R	R	R	R
2 CHANGE	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	<G-	G	G	R	R	R
3 CHANGE	R	R	<Y-	Y	Y	R	R	R
PHASE 4	R	R	R	R	R	G	G	G
4 CHANGE	R	R	R	R	R	Y	Y	Y
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R

EQUIPMENT LIST "A"

A. APPROVED SHA EQUIPMENT TO BE PURCHASED BY THE DEVELOPER AND INSTALLED BY THE CONTRACTOR. ALL EQUIPMENT IN THIS LIST SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.	QUANTITY	DESCRIPTION
		NONE

CONTACT PERSONS FOR DISTRICT 5 ARE AS FOLLOWS:

MR. JOHN MAYS ASSISTANT DISTRICT ENGINEER - UTILITIES (410) 841-1002	MR. LARRY ELLIOTT ASSISTANT DISTRICT ENGINEER - TRAFFIC (410) 841-1003	MR. CHARLES GEORGE ASSISTANT DISTRICT ENGINEER - MAINTENANCE (410) 841-1002
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CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF SR. CHIEF, TRAFFIC OPERATIONS (410) 787-7630	MR. EUGENE BAILEY TEAM LEADER SIGN OPERATIONS (410) 787-7676
MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF, TRAFFIC OPERATIONS (410) 787-7631	MR. DAVID SCHWARTZ SUPPLY OFFICE IV (SIGNAL SHOP WAREHOUSE) (410) 787-7668

MR. ED RODENHIZER
TEAM LEADER SIGNAL OPERATIONS
(410) 787-7652

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO OOTS FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.	QUANTITY	DESCRIPTION
1001	LS	MAINTENANCE OF TRAFFIC
2002	2 EA	TEST PIT EXCAVATION
5001	2 EA	FURNISH AND INSTALL HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING ARROW
5002	4 EA	FURNISH AND INSTALL HEAT APPLIED PERMANENT THERMOPLASTIC PAVEMENT MARKING LETTER
5005	105 LF	FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED THERMOPLASTIC PAVEMENT MARKING
8009	3 EA	FURNISH AND INSTALL 12 IN. VEHICULAR SIGNAL HEAD SECTION OPTICALLY PROGRAMMED
8011	18 EA	FURNISH AND INSTALL 12 IN. VEHICULAR SIGNAL HEAD SECTION
8013	1 EA	FURNISH AND INSTALL 15 FT. BRACKET ARM FOR SIGNAL STRUCTURE
8014	1 EA	FURNISH AND INSTALL 250 WATT HPS LUMINAIRE WITH PHOTOCELL
8020	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT FOR SIGNAL

EQUIPMENT LIST "B" CONTINUED

ITEM NO.	QUANTITY	DESCRIPTION
8035	1 EA	FURNISH AND INSTALL MAST ARM POLE WITH TWIN 50 FT./70 FT. MAST ARMS
8043	2 EA	FURNISH AND INSTALL MICRO PROBE SET 1000 FT. LEAD-IN
8051	70 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - TRENCHED
8052	350 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT - BORED
8053	1430 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 RIGID ELECTRICAL PVC CONDUIT TRENCHED
8057	7 CY	FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION
8058	160 LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4" X 4"
8059	108 LF	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4" X 6"
8060	210 LF	FURNISH AND INSTALL NO. 6 A.W.G. STRANDED BARE COPPER GROUND WIRE
8062	25 LF	FURNISH AND INSTALL 1 IN. ELECTRICAL CONDUIT GALVANIZED SLEEVE
8068	25 LF	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT FOR DETECTOR WIRE SLEEVE
8070	50 LF	FURNISH AND INSTALL ELECTRICAL CABLE 1-CONDUCTOR NO. 4 A.W.G.-THHN/THWN
8072	14 EA	FURNISH AND INSTALL ELECTRICAL HANDHOLE
8076	2830 LF	FURNISH AND INSTALL 12-PAIR COMMUNICATION CABLE, JELLY-FILLED (UNDERGROUND)
8080	2 EA	FURNISH AND INSTALL GROUND ROD 3/4 IN. DIAMETER BY 10 FT. LENGTH
8081	640 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR (ALUMINUM SHIELDED)
8084	80 LF	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 A.W.G.)
8085	1060 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR (NO. 14 A.W.G.)
8086	260 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR (NO. 12 A.W.G.)
8087	1700 LF	FURNISH AND INSTALL LOOP WIRE ENCASED IN FLEXIBLE TUBING (NO. 14 A.W.G.)
8088	490 LF	FURNISH AND INSTALL SAW CUT FOR SIGNAL LOOP DETECTOR
8093	1 EA	FURNISH AND INSTALL CONTROLLER AND CABINET BASE MOUNT
---	1 EA	FURNISH AND INSTALL R10-12(4) SIGN (36" X 42") MAST ARM MOUNT
---	2 EA	FURNISH AND INSTALL W3-3 SIGN (48" X 48"), W/"NEW" PANEL (30" X 30"), AND FLAGS GROUND MOUNTED
---	1 EA	FURNISH AND INSTALL R3-4 SIGN (36" X 36") GROUND MOUNTED
---	2 EA	FURNISH AND INSTALL R4-7 SIGN (36" X 48") GROUND MOUNTED
---	1 EA	FURNISH AND INSTALL R4-7B SIGN (36" X 48") WITH QM-1(1) SIGN (18" X 18") GROUND MOUNTED
---	1 EA	FURNISH AND INSTALL R5-1 SIGN (36" X 36") GROUND MOUNTED
---	1 EA	FURNISH AND INSTALL W4-1 SIGN (48" X 48") GROUND MOUNTED
---	2 EA	FURNISH AND INSTALL 4-CHANNEL TIME-DELAY-OUTPUT LOOP DETECTOR AMPLIFIER
---	10 EA	FURNISH AND INSTALL GROUND MOUNTED DELINEATORS

EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

ITEM NO.	QUANTITY	DESCRIPTION
		NONE

TRAFFIC **C**ONCEPTS, INC.

325 Gambrills Road
Suite E
Gambrills, MD 21054
(410) 923-7101



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
GENERAL INFORMATION
MD 2-4 AND HUNTINGTON HIGH SCHOOL ENTRANCE

DRAWN BY: <u>M.HOWELL</u>	F.A.P. NO. <u>418861</u>	TS NO. <u>418861</u>	SHEET NO. <u>3 OF 3</u>
CHECKED BY: <u>T.ZAYDEL</u>	S.H.A. NO. <u>BW996M82</u>	T.I.M.S. NO. <u>F258</u>	
SCALE: <u>NONE</u>	COUNTY: <u>CALVERT</u>	LOG MILE: <u></u>	